This response amends currently pending Claims 1-11 and 13-20. Upon amendment, the application will have two independent claims (amended Claims 1 and 6) and a total of twenty claims (amended Claims 1-11, currently pending Claim 12, and amended Claims 13-20). Therefore, no fees for excess claims are due.

This response amends the currently pending claims to bring the application into condition for allowance or into better condition for appeal. As described below, all of the claim amendments are supported by the currently pending claims (as well as the originally filed application).

Support for amending currently pending Claims 1-6 and 9 can be found in, inter alia, originally filed Claim 1-6 and 9, respectively; and support for amending currently pending Claims 1-7 and 9 can also be found in currently pending Claims 1-7 and 9, respectively.

Support for amending currently pending Claims 7, 8, 10, and 14 can be found in, inter alia, originally filed Claim 1; and support for amending currently pending Claims 7, 8, 10, and 14 can also be found in, inter alia, currently pending Claim 1.

Support for amending currently pending Claims 11, 13, and 15-17 can be found in, inter alia, originally filed Claim 1; and support for amending currently pending Claims 11, 13, and 15-17 can also be found in, inter alia, currently pending Claims 11, 13, and 15-17, respectively.

Support for amending currently pending Claims 18-20 to specify that Cp\* is



09/300,302

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can be found in, inter alia, formula II in originally filed Claim 1 and currently pending Claim 1 when L is a cyclopentadienyl ring, R is a  $C_1$  alkyl group, a is 0, and k is 5.

Amended Claims 1-8, 10, 11, and 13-20 are readable upon the elected invention and should be considered on the merits. Amended Claim 9 and currently pending Claim 12 are not readable upon the elected invention, but should be considered on the merits because they are each dependent on an allowable elected claim (amended. Claim 8 or amended Claim 11).

In item 2 on pages 2-3 of the outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 1-8, 10, 11, and 13-20 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. The Applicants respectfully traverse the rejection in item 2 because the currently pending claims are not indefinite. Furthermore, this rejection is now moot and should be withdrawn because amended Claims 1-8, 10, 11, and 13-20 are not indefinite.

In item 4 on page 3 of the outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 1-4, 6, 7, 10, 11, 13-16, 18, 19 for allegedly being obvious over Vega et al.'s European Patent Document No. EP-0757992 A1 (hereinafter referred to as the "Vega document") for the reasons that are set forth in the second paragraph of item 9 on pages 4-5 of the November 17, 2000 Office Action. In item 5 on page 3 of the

can be found in, inter alia, formula II in originally filed Claim 1 and currently pending Claim 1 when L is a cyclopentadienyl ring, R is a  $C_1$  alkyl group,  ${\bf a}$  is 0, and  ${\bf k}$  is 5.

Amended Claims 1-8, 10, 11, and 13-20 are readable upon the elected invention and should be considered on the merits. Amended Claim 9 and currently pending Claim 12 are not readable upon the elected invention, but should be considered on the merits because they are each dependent on an allowable elected claim (amended Claim 8 or amended Claim 11).

In item 2 on pages 2-3 of the outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 1-8, 10, 11, and 13-20 under 35 U.S.C. § 112, second paragraph, for allegedly being indefinite. The Applicants respectfully traverse the rejection in item 2 because the currently pending claims are not indefinite. Furthermore, this rejection is now moot and should be withdrawn because amended Claims 1-8, 10, 11, and 13-20 are not indefinite.

In item 4 on page 3 of the outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 1-4, 6, 7, 10, 11, 13-16, 18, 19 for allegedly being obvious over Vega et al.'s European Patent Document No. EP-0757992 A1 (hereinafter referred to as the "Vega document") for the reasons that are set forth in the second paragraph of item 9 on pages 4-5 of the November 17, 2000 Office Action. In item 5 on page 3 of the

outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 1-8, 10, 11, and 13-20 for allegedly being obvious over Hidalgo Llinas et al.'s European Patent Document No. EP-0802203 A1 (hereinafter referred to as the "Llinas document") for the reasons that are set forth in the second paragraph of item 10 on page 5 of the November 17, 2000 Office Action. In item 6 on page 3 of the outstanding August 10, 2001 Office Action, the Examiner rejects currently pending Claims 6 and 14 for allegedly being obvious over Canich's U.S. Patent No. 5,955,625 (hereinafter referred to as the "Canich patent") for the reasons that are set forth in the second paragraph of item 11 on page 6 of the November 17, 2000 Office Action. The Applicants respectfully traverse these obviousness rejections for the reasons that are set forth below.

In item 4 of the August 10, 2001 Office Action and in item 9 of the November 17, 2000 Office Action, the Examiner rejects currently pending Claims 1-4, 6, 7, 10, 11, 13-16, 18, 19 because the metallocene compound of formula I in currently pending Claims 1 and 6 is allegedly obvious in view of formula I on page 3 of the Vega document. However, formula I on page 3 of the Vega document is an extremely broad genus that contains an almost innumerable number of metallocene compounds (i.e., more than 100 million metallocene compounds) because each of the subscripts  ${\bf o}$ ,  ${\bf p}$ ,  ${\bf q}$ , and  ${\bf s}$  in formula I on page 3 of the Vega document can vary from 0 to 10; because Y can be halogen, amino, alkylamino, or hydroxy; and because  ${\bf R}_1$  through  ${\bf R}_8$  are each selected from a group consisting of a very large number of substituents.

According to the U.S. Court of Appeals for the Federal Circuit, a reference that discloses a generic formula that encompasses more than 100 million specific compounds does not render obvious

claimed compounds that fall within the generic formula if the "typical," "preferred," and "optimum" compounds that are disclosed in the reference differ greatly from and are more complex than the claimed compounds. (In re Baird, 29 U.S.P.Q.2d 1550, 1552 (Fed. Cir. 1994).) As explained below, the metallocene compound of formula I in currently pending Claims 1 and 6 is nonobvious over the Vega document because the "typical," "preferred," and "optimum" compounds that are disclosed in the Vega document differ greatly from and are more complex than the claimed metallocene compound.

Formula I on page 3 of the Vega document discloses an almost innumerable number of metallocene compounds (i.e., more than 100 million metallocene compounds), but the Vega document proceeds to teach that useful metallocene compounds (i.e., "typical," "preferred," and "optimum" compounds) of Vega's formula I should have one of the following functional groups: ClSiMe2- or BrSiMe2-. For example, the last paragraph on page 3 of the Vega document names 16 different metallocene compounds; and the functional group in each of these named metallocene compounds is either ClSiMe2- or BrSiMe2-. Similarly, Examples 3-8 on page 7 of the Vega document are the only working examples in the Vega document that teach how to prepare a catalyst component comprising a metallocene compound supported on inorganic support; and the functional group for each of these metallocene compounds is ClSiMe2-.

The Vega document then indicates that the functional group  $(ClSiMe_2- or BrSiMe_2-)$  of the metallocene compound is critical to Vega's catalyst component because the functional group forms a chemical bond between the support and the metallocene compound

that "provides a catalyst which maintains the structure of the active species and, in the presence of a cocatalyst, is very active in olefin polymerization" (see lines 25-26 on page 5 of the Vega document). Importantly, Vega's critical functional groups (ClSiMe2- and BrSiMe2-) are chemically very different than and much bulkier than the OH functional group in the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6. And because Vega's functional groups are very different than (and more complex than) the OH functional group in the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6, amended independent Claims 1 and 6 are nonobvious over the Vega document.

Amended independent Claims 1 and 6 are further nonobvious over the prior art because, as explained in detail below, Vega's critical functional groups (ClSiMe<sub>2</sub>- and BrSiMe<sub>2</sub>-) form critical chemical bonds with an inorganic support that are very different than (and more complex than) the critical chemical bond that is formed when the Applicants' claimed formula I metallocene compound, which has an OH functional group, reacts with an inorganic support.

Vega's critical chemical bond between the support and metallocene compound is illustrated in Appendices E and F, which are enclosed herewith. Appendix E shows the critical chemical bond that is formed when Vega's metallocene compound having a  $ClSiMe_2$ -functional group reacts with a hydroxy group on an inorganic silica support; and Appendix F shows the critical chemical bond that is formed when Vega's metallocene compound, which has a  $ClSiMe_2$ -functional group, reacts with an amine group on a functionalized inorganic silica support. As illustrated in Appendix E, the critical chemical bond that is formed when Vega's

metallocene compound reacts with a hydroxy group on an inorganic silica support is an -O-SiMe<sub>2</sub>- bond. As illustrated in Appendix F, the critical chemical bond that is formed when Vega's metallocene compound reacts with an amine group on a functionalized inorganic silica support is an -O-Si-[spacer]-NH-SiMe<sub>2</sub>- bond.

Thus, the Vega document teaches that the critical chemical bond between Vega's metallocene compound (which has a ClSiMe<sub>2</sub>- or a BrSiMe<sub>2</sub>- functional group) and the inorganic support is either an -O-SiMe<sub>2</sub>- bond or an -O-Si-[spacer]-NH-SiMe<sub>2</sub>- bond. Vega's critical chemical bonds are very different than (and more complex than) the chemical bond that is formed when the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6 reacts with an inorganic silica support.

Appendix G, which is enclosed herewith, shows the critical chemical bond that is formed when the Applicants' claimed formula I metallocene compound, which has an OH functional group, reacts with an inorganic silica support. As illustrated in Appendix G, the critical chemical bond that is formed when the Applicants' claimed metallocene compound reacts with an inorganic silica support is an -O-[hydrocarbon spacer]- bond, which is significantly different than (and less complex) than Vega's -O-SiMe2- critical bond and Vega's -O-Si-[spacer]-NH-SiMe2- critical bond. And because Vega's critical chemical bonds are very different than (and more complex than) the chemical bond that is formed when the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6 reacts with an inorganic silica support, amended independent Claims 1 and 6 are further nonobvious over the Vega document.

Amended independent Claim 6 is further nonobvious over the Vega document because the catalytic component that is claimed in amended Claim 6 does not include an inorganic support, which is a required element of Vega's catalytic component. According to the Vega document, the metallocene compound must be supported on solid inorganic support (see page 3, lines 10-11; page 5, lines 25-26; and Examples 3-21 on pages 7-9). Specifically, the Vega document teaches that the metallocene compound must be supported on a solid support in order to provide "a catalyst which maintains the structure of the active species and, in the presence of a cocatalyst, is very active in olefin polymerization" (see lines 25-26 on page 5 of the Vega document); and all of the working examples in the Vega document (see Examples 3-21 on pages 7-9 of the Vega document) involve metallocene compounds that are supported on a solid support.

By contrast, the catalytic component that is claimed in amended Claim 6 does not include a solid support because the Applicants' claimed catalytic component is insoluble in the solvents in which  $\alpha$ -polymerization is carried out. Specifically, the Applicants discovered that, when the Applicants' claimed metallocene compound of formula I (with the OH functional group) in amended Claim 6 reacts with alumoxane or a trialkylaluminum (as called for in amended Claim 6), the resulting catalytic component is insoluble in the solvents in which  $\alpha$ -polymerization is carried out; and thus the catalytic component that is claimed in amended Claim 6 does not have to be supported on a solid support. And because the catalytic component that is claimed in amended Claim 6 does not include a solid support, amended independent Claim 6 is further nonobvious over the Vega document, which teaches that Vega's metallocene compounds must be supported on a solid support.

In item 5 of the August 10, 2001 Office Action and in item 10 of the November 17, 2000 Office Action, the Examiner rejects currently pending Claims 1-4, 6, 7, 10, 11, 13-16, 18, 19 because the metallocene compound of formula I in currently pending Claims 1 and 6 is allegedly obvious in view of formula IIIa on page 6 of the Llinas document (see lines 10-20 on page 6 of the Llinas document). However, formula IIIa on page 6 of the Llinas document is an extremely broad genus that contains an almost innumerable number of metallocene compounds (i.e., more than 100 million metallocene compounds): (1) because formula IIIa includes W, which may be represented by formula IV (see lines 16-29 on page 7 of the Llinas document) wherein each of the subscripts o, p, q, r, and  $\mathbf{s}$  in formula IV on page 7 of the Llinas document can vary from 0 to 10; (2) because Y in formula IV on page 7 of the Llinas document can be halogen,  $NR_{11}R_{12}$ , or hydroxy; (3) because formula IIIa includes A, which is represented by formula V (see lines 41-50 on page 7 of the Llinas document) wherein subscripts  $\mathbf{j}$  and  $\mathbf{k}$ can vary from 0 to 3; and (4) because  $R_7$  through  $R_{13}$  in formulas IV and V on page 7 of the Llinas document are each selected from a group consisting of a very large number of substituents.

As noted above, according to the U.S. Court of Appeals for the Federal Circuit, a reference that discloses a generic formula that encompasses more than 100 million specific compounds does not render obvious claimed compounds that fall within the generic formula if the "typical," "preferred," and "optimum" compounds that are disclosed in the reference differ greatly from and are more complex than the claimed compounds. (In re Baird, 29 U.S.P.Q.2d 1550, 1552 (Fed. Cir. 1994).) As explained below, the metallocene compound of formula I in currently pending Claims 1 and 6 is nonobvious over the Llinas document because the

"typical," "preferred," and "optimum" compounds that are disclosed in the Llinas document differ greatly from and are more complex than the claimed metallocene compound.

Formula IIIa on pages 6 of the Llinas document discloses an almost innumerable number of metallocene compounds (i.e., more than 100 million metallocene compounds), but the Llinas document (in the working examples) proceeds to teach that useful metallocene compounds (i.e., "typical," "preferred," and "optimum" compounds) of Llinas's formula IIIa should have either no functional groups or one of the following functional groups:

Examples 6-12 on pages 11-12 of the Llinas document are the only working examples in the Llinas document that teach how to prepare a catalyst component comprising a metallocene compound supported on inorganic support; and the chemical reactions in Examples 6-12 are represented schematically in Appendices H-N, respectively, which are enclosed herewith.

In Examples 6-9 and 11 on pages 10-11 of the Llinas document, the metallocene compounds have no functional groups.

In Example 10 on page 11 of the Llinas document, the functional group for the metallocene compound is Me Me

(hereinafter referred to as the "-Si(Me) $_2$ -O-Si(Me) $_2$ - functional group").

In Example 12 on page 11 of the Llinas document, the functional group for the metallocene compound is ClSiMe<sub>2</sub>-.

The functional group of the metallocene compound is critical to Llinas's catalyst component because the functional group forms the chemical bond between the support and the metallocene compound. Significantly, Llinas's critical functional groups (the -Si(Me)<sub>2</sub>-O-Si(Me)<sub>2</sub>- functional group and ClSiMe<sub>2</sub>-) are chemically very different than and much bulkier than the OH functional group in the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6. And because Llinas's functional groups are very different than (and more complex than) the OH functional group in the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6, amended independent Claims 1 and 6 are nonobvious over the Llinas document.

Amended independent Claims 1 and 6 are further nonobvious over the prior art because, as explained in detail below, each of Llinas's critical functional groups (the  $-\text{Si}(\text{Me})_2-\text{O-Si}(\text{Me})_2-$  functional group and  $\text{ClSiMe}_2-$ ) forms a critical chemical bond with an inorganic support that is very different than (and more complex

than) the critical chemical bond that is formed when the Applicants' claimed formula I metallocene compound, which has an OH functional group, reacts with an inorganic support.

Llinas's critical chemical bonds between the support and metallocene compound are illustrated in the enclosed Appendices H through N; and, as illustrated in Appendices H through N, Llinas's critical chemical bonds are very different than (and much more complex than) the chemical bond that is formed when the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6 reacts with an inorganic silica support.

Appendix H, which illustrates the reaction in Example 6 on page 10 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound, which has no functional group, reacts with an amine group on a functionalized inorganic support. As illustrated in Appendix H, the critical chemical bond that is formed is

OCH<sub>3</sub>

- 0 - Si - 
$$CH_2$$
 -  $CH_2$  -  $CH_2$  -  $NH$  - .   
O $CH_3$ 

Appendix I, which illustrates the reaction in Example 7 on pages 10-11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound, which has no functional group, reacts with an amine group on a functionalized inorganic support. As illustrated in Appendix I, the critical

Appendix J, which illustrates the reaction in Example 8 on page 11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound, which has no functional group, reacts with an amine group on a functionalized inorganic support. As illustrated in Appendix J, the critical chemical bond that is formed is

OCH<sub>3</sub>

$$|$$
- 0 - Si - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - NH - .
 $|$ 
OCH<sub>3</sub>

Appendix K, which illustrates the reaction in Example 9 on page 11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound, which has no functional group, reacts with an amine group on a functionalized inorganic support. As illustrated in Appendix K, the critical chemical bond that is formed is

OCH3

Phenyl

$$|$$
 - 0 - Si - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - N - .  $|$  OCH<sub>3</sub>

Appendix L, which illustrates the reaction in Example 10 on page 11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound reacts with an amine group on a functionalized inorganic support. Llinas's metallocene compound in Example 10 has an  $-Si(Me)_2-O-Si(Me)_2$  functional group. Thus, as illustrated in Appendix L, the critical chemical bond that is formed is  $CH_3$   $CH_3$ 

Appendix M, which illustrates the reaction in Example 11 on page 11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound, which has no functional group, reacts with an amine group on a functionalized inorganic support. As illustrated in Appendix M, the critical chemical bond that is formed is OCH<sub>3</sub>

Appendix N, which illustrates the reaction in Example 12 on page 11 of the Llinas document, shows the critical chemical bond that is formed when Llinas's metallocene compound reacts with an amine group on a functionalized inorganic support. Llinas's metallocene compound in Example 12 has a  $ClSiMe_2$ - functional group. Thus, as illustrated in Appendix N, the critical chemical bond that is formed is  $OCH_3$   $CH_3$ 

As explained above and as illustrated in Appendices H through N, Llinas' critical chemical bonds are very different than (and more complex than) the chemical bond that is formed when the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6 reacts with an inorganic silica support. Specifically, as illustrated in Appendix G, the critical chemical bond that is formed when the Applicants' claimed metallocene compound reacts with an inorganic silica support is an -O-[hydrocarbon spacer] - bond, which is significantly different than (and less complex) than Llinas's critical bonds, all of which include a silicon and nitrogen atoms. And because Llinas's critical chemical bonds are very different than (and more complex than) the chemical bond that is formed when the Applicants' claimed metallocene compound of formula I in amended Claims 1 and 6 reacts with an inorganic silica support, amended independent Claims 1 and 6 are further nonobvious over the Llinas document.

Amended independent Claim 6 is further nonobvious over the Llinas document because the catalytic component that is claimed in amended Claim 6 does not include a functionalized support, which is a required element of Llinas's catalytic component. According to the Llinas document, the metallocene compound must be supported on a functionalized support (see page 3, lines 51-57; page 8, lines 47-52; and Examples 6-24 on pages 10-13). Specifically, the Llinas document teaches that the "use of these functionalized supports involves a strong anchorage between the catalytic support and the active species preventing their separation in the polymerization medium" (see lines 36-38 on page 3 of the Llinas document); and all of the working examples in the Llinas document (see Examples 6-24 on pages 10-13 of the Llinas document) involve metallocene compounds that are supported on a functionalized support.

By contrast, the catalytic component that is claimed in amended Claim 6 does not include a functionalized support because the Applicants' claimed catalytic component is insoluble in the solvents in which  $\alpha$ -polymerization is carried out. Specifically, the Applicants discovered that, when the Applicants' claimed metallocene compound of formula I (with the OH functional group) in amended Claim 6 reacts with alumoxane or a trialkylaluminum (as called for in amended Claim 6), the resulting catalytic component is insoluble in the solvents in which  $\alpha$ -polymerization is carried out; and thus the catalytic component that is claimed in amended Claim 6 does not have to be supported on a functionalized support. And because the catalytic component that is claimed in amended Claim 6 does not include a functionalized support, amended independent Claim 6 is further nonobvious over the Llinas document, which teaches that the metallocene compound must be supported on a functionalized support.

In item 6 of the August 10, 2001 Office Action and in item 11 of the November 17, 2000 Office Action, the Examiner rejects currently pending Claims 6 and 14 because the metallocene compound of formula III in currently pending Claims 6 and 14 is allegedly obvious in view of formula IV in column 4 of the Canich patent (see lines 1-59 of column 4 in the Canich patent). However, formula IV in column 4 of the Canich patent is an extremely broad genus that contains an almost innumerable number of monocyclopentadienyl compounds (i.e., more than 100 million monocyclopentadienyl compounds) because subscript u can vary from 0 to 6, because subscript w can vary from 0 to 3, because subscript x can vary from 0 to 4, and because R¹ through R⁴ are each selected from a group consisting of a very large number of substituents.

As noted above, according to the U.S. Court of Appeals for the Federal Circuit, a reference that discloses a generic formula that encompasses more than 100 million specific compounds does not render obvious claimed compounds that fall within the generic formula if the "typical," "preferred," and "optimum" compounds that are disclosed in the reference differ greatly from and are more complex than the claimed compounds. (In re Baird, 29 U.S.P.Q.2d 1550, 1552 (Fed. Cir. 1994).) As explained below, the metallocene compound of formula III in amended Claim 6 is nonobvious over the Canich patent because the "typical," "preferred," and "optimum" compounds that are disclosed in the Canich patent differ greatly from and are more complex than the claimed metallocene compound.

Formula IV in column 4 of the Canich patent discloses an almost innumerable number of monocyclopentadienyl compounds (i.e., more

than 100 million monocyclopentadienyl compounds), but the Canich proceeds to teach that useful monocyclopentadienyl compounds (i.e., "typical," "preferred," and "optimum" compounds) of Canich's formula IV should have: (1) no functional groups (see line 48 of column 13 through line 27 of column 16 of the Canich patent); (2) a hydrocarbon silyl functional group (see line 45 of column 5 through line 27 of column 9 of the Canich patent); or (3) a hydrocarbon germanyl functional group (see line 18 of column 9 through line 8 of column 13 of the Canich patent). Moreover, Examples A-I (in columns 25-29 of the Canich patent), which are the only working examples in the Canich patent, teach that the functional group of the monocyclopentadienyl compound should be either Me<sub>2</sub>Si- (see Examples A, B, C, G, H, and I) or Ph<sub>2</sub>Si- (see Examples D and E and Comparative Example F).

The functional group of the metallocene compound is critical to the Applicants' claimed metallocene compound of formula III in amended Claim 6 because the functional group can form a chemical bond between a support and the metallocene compound. However, Canich's critical functional groups (i.e., the hydrocarbon silyl functional groups and the hydrocarbon germanyl functional groups) are chemically very different than and much bulkier than the OH functional group in the Applicants' claimed metallocene compound of formula III in amended Claim 6. And because Canich's functional groups are very different than (and more complex than) the OH functional group in the Applicants' claimed metallocene compound of formula III in amended Claim 6, amended independent Claim 6 is nonobvious over the Canich patent.

Moreover, when the Applicants' claimed metallocene compound (with the OH functional group) of formula III in amended Claim 6 reacts with alumoxane or a trialkylaluminum, as called for in amended

Claim 6, the resulting catalytic component is insoluble in the solvents in which  $\alpha\text{-polymerization}$  is carried out. However, when Canich's monocyclopentadienyl compounds (with the bulkier functional groups) react with alumoxane, the Canich patent (see lines 61-67 in column 27 and lines 23-29 in column 28) suggests that the resulting catalytic component is soluble in the solvents in which polymerization is carried out. Thus, the catalytic component that is claimed in amended Claim 6 is further nonobvious over the prior art because the claimed catalytic component is insoluble in the solvents in which  $\alpha\text{-polymerization}$  is carried out, while the catalytic components that are disclosed in the Canich patent are soluble in the solvents in which  $\alpha\text{-polymerization}$  is carried out.

As explained above, amended independent Claims 1 and 6 are nonobvious over the prior art. Therefore, all of the other claims (amended Subclaims 2-5 and 7-11, currently pending Subclaim 12, and amended Subclaims 13-20) are nonobvious over the prior art at the very least because they are each dependent on an allowable base claim (amended Claim 1 or 6).

In addition, amended Subclaims 2-5 and 7-11, currently pending Subclaim 12, and amended Subclaims 13-20 are further nonobvious over the prior art because the prior art does not teach or suggest the particular features that are claimed in these subclaims. For example, amended Subclaim 10 is further nonobvious over the prior art because it specifies that the metallocene compound is defined by formula II, which is not taught or suggest by the prior art. Similarly, amended Subclaim 14 is further nonobvious over the prior art because it specifies that the metallocene compound is defined by formula II or III, wherein  $\mathbf{c}$  is equal to 1 and  $\mathbf{L}^{\mathbf{r}}$  is oxygen; and the prior art does not teach or suggest the

metallocene compound that is claimed in amended Subclaim 14.

Amended nonelected Subclaim 9 is dependent on amended elected Subclaim 8; and currently pending nonelected Subclaim 12 is dependent on amended Subclaim 11. Therefore, if amended Subclaims 8 and 12 are ultimately found to be allowable, then the Examiner should consider amended nonelected Subclaim 9 and currently pending nonelected Subclaim 12 on the merits.

Finally, this response amends the specification to correct a minor typographical error.

It is submitted that the application is in condition for allowance. Allowance of the application at an early date is solicited.

The Applicants submitted an Information Disclosure Statement (IDS) on February 10, 2000, but the Examiner has not yet acknowledged considering this IDS. Therefore, the Examiner is respectfully requested to consider the February 10, 2000 IDS on the merits before issuing the next Office Action.

This response amends currently pending Claims 1-11 and 13-20. The amendments described in the preceding sentence were done to claim the invention more fully and were not done to overcome the prior art, were not done to overcome rejections under 35 U.S.C. § 112, and were not done to overcome any other rejections are objections. The amendments described in the first sentence of this paragraph shall not be considered necessary to overcome the prior art, shall not be considered necessary to overcome rejections under 35 U.S.C. § 112, and shall not be considered necessary to overcome any other rejections or objections.

Nothing in this response shall constitute an admission against interest for the Applicants or the Assignee in any of the Applicants' or Assignee's other patent applications or patents. Nothing in this response shall be used against the Applicants' or Assignee's interests in the Applicants' or Assignee's other patent applications and patents.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to Deposit Account No. 12-0415. In particular, if this response is not timely filed, then the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 C.F.R § 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed; and the petition fee due in connection therewith may be charged to Deposit Account No. 12-0415.

Respectfully submitted,

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Enclosures: Appendices A, B, C, D, E, F, G, H, I, J, K, L, M, N